



Ministry of Land,
Infrastructure and Transport

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Shooting for the stars

Korea's first national land observation satellite delivers its first picturesque results.

What does Dokdo look like in the spring? The Ministry of Land, Infrastructure and Transport of Korea(MOLIT) unveiled the video recordings of Dokdo transmitted by the next-generation, mid-sized observation satellite (the national land observation satellite) Korea launched from the Baikonur Cosmodome in Kazakhstan on March 22.



View of Dokdo from the space

Using a 50cm-class electro optical camera, the national land observation satellite gives a rare glimpse into the island. The above image captured on March 31 shows a helipad located in the eastern side of Dokdo and a ship cruising along its sea.

Judging by the clear image, the observation satellite, which is in trial operation now, seems to be performing well. The quality of imagery from the satellite will likely improve after further calibration and improvement during the trial operation.

Along with Dokdo Island, the satellite also shared images of six symbolic buildings of Korea including the Government Complex in Sejong, the administrative capital of Korea, the Seoul Olympic Stadium, and the Daejeon World Cup Stadium.

The first mid-sized practical satellite 'made-in-Korea'

Developed by the Korea Aerospace Research Institute (KARI) with funding from the Ministry of Science and ICT and the Ministry of Land, Infrastructure and Transport, the national land observation satellite is the 17th satellite Korea launched to the space. Since the KITSAT-1(Our Star) in 1992, Korea deployed eight small satellites, five KOMPSAT satellites(Arirang), and three GEO-KOMPSAT satellites(Cheollian).



Launching of the national land observation satellite from the Baikonur Cosmodome in Kazakhstan on March 22

The new satellite may be similar to the mid-sized practical satellites previously launched but it distinguishes itself from its predecessors thanks to its adoption of the first satellite platform Korea built on its own.

Except for the charge-coupled device(CCD), almost all the components and technologies that went into making the satellite were developed and manufactured in Korea. Among the components, development of the optical payload is particularly worth noting as it underpins the core function of an observation satellite. With such achievements, the new observation satellite will leave its mark on Korea's aerospace history.

Ushering the K-wave to satellite services and digital economy

The official mission of the national land observation satellite is to scan the Korean peninsula from 497.8km above the surface at 11 am local time when it reaches Korea during its daily orbiting of the Earth. Outputs from the satellite will be used for purposes as diverse as inspection of the national territory, survey of crop cultivation in farms, and gathering of raw data for map making and urban planning. It will also boost Korea's capacity for disaster response as it will give an exclusive data source on natural disasters like storms, heavy snow, floods, and wildfires.

Outputs from the satellite will also provide inputs for the digital twin platform and smart city, two key areas of development included in the Korea's New Deal Program. Other areas that will likely benefit from the observation service include development of advanced transportation like autonomous vehicles and drones and disaster emergency services